applied sciences

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National Aeronautics and Space Administration

overview

NASA produces research results, such as observations from satellites, predictions from models, and knowledge from scientific research. However the story doesn't end with the collection of data. These scientific observations only truly begin to serve society when they are linked to real-world applications, projects that improve our quality of life on a daily basis.

NASA's Applied Sciences Program evaluates the potential of research results from Earth observations and models to serve society by conducting projects with regional and national partners. The partners have the responsibility to provide information to decision makers for a specific aspect of the Earth system. These projects address NASA's areas of National Application:

Agriculture
Air Quality
Natural Disasters
Ecological Forecasting
Public Health
Water Resources
Weather
Climate

The NASA Applied Sciences Program works with other government agencies, universities, and non-profit, international, and private sector organizations to extend the benefits of Earth Science research results. This community of people and organizations includes those who provide Earth science results and those who utilize those results in their decision-making activities, such as public health officials, disaster managers and policy makers. NASA works with organizations that have the right tools to apply NASA results from Earth science research to make timely and accurate decisions regarding the management of resources and the development of policy. Examples include helping manage forest fires, coastal environments, agriculture, impacts of infectious diseases, aviation safety, risks to public health and hurricane forecasting.

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agriculture

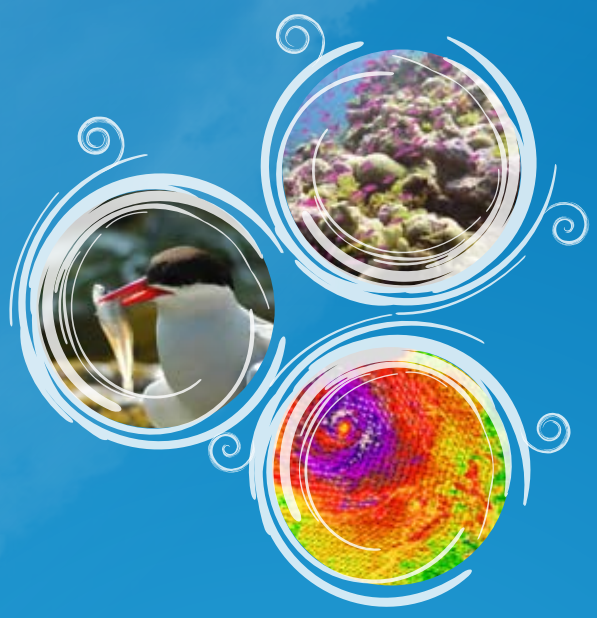
This program extends NASA Earth science products to the management of land resources, especially to support agricultural yield forecasts, manage invasive species, assess the carbon implications of agricultural activities and biofuels production.

air quality

This program facilitates the application of Earth Science satellite products and models to air quality management and policy activities, particularly issues associated with the implementation of air quality standards, policy, and regulation for environmental, economic, and human welfare.

ecological forecasting

This program integrates NASA Earth science products into partners' efforts to conserve biodiversity, manage invasive, threatened or endangered species and promote sustainable development. This application emphasizes the use of satellite observations in tandem with models in order to develop improved ecological forecasting capabilities.



natural disasters

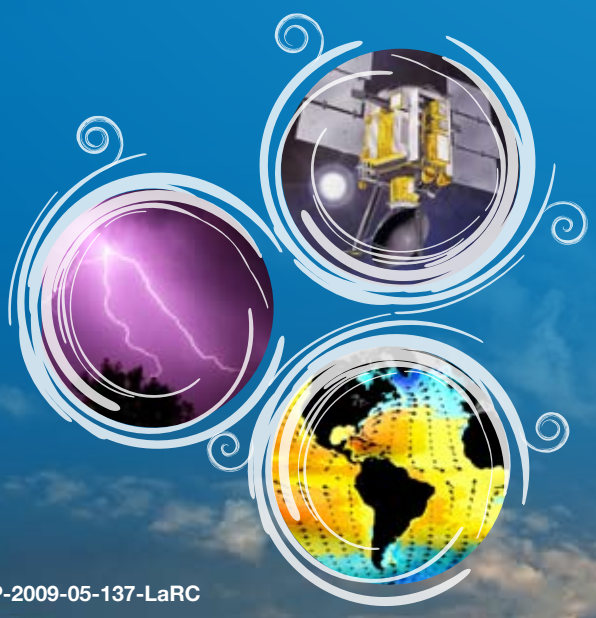
The Disaster Management Program promotes increased awareness, knowledge, and adoption of disaster reduction and management practices using integrated Earth observations. The Disaster Management application covers up to 15 different disaster types including floods, wildfires and hurricanes.

public health

The Public Health Program extends the benefits of NASA research, predictive models and technology to partners' decision support systems for public health, medical, and environmental health issues. NASA explores these issues in order to identify and mitigate public health risks for overall improvements to health and safety.

water resources

This program utilizes NASA satellite observations, predictive models and partnerships in order to address global issues related to water availability, forecast and quality. The water resources area focuses on four major themes: streamflow and flood forecasting, water availability, drought and water quality..



weather

The Weather program utilizes NASA resources to investigate the societal impacts and socioeconomic costs associated with weather, with a focus on aviation. NASA and partnering organizations work to extend NASA Earth science satellite observations and model predictive capabilities to address safety, capacity, security, and environmental issues.

national applications

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